

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: INVUE

Report Number: P367232

Luminaire Tested: **MSA-SA2A-760-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367232
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-760-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7937 lumens
Efficiency: N/A
Efficacy: 120.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

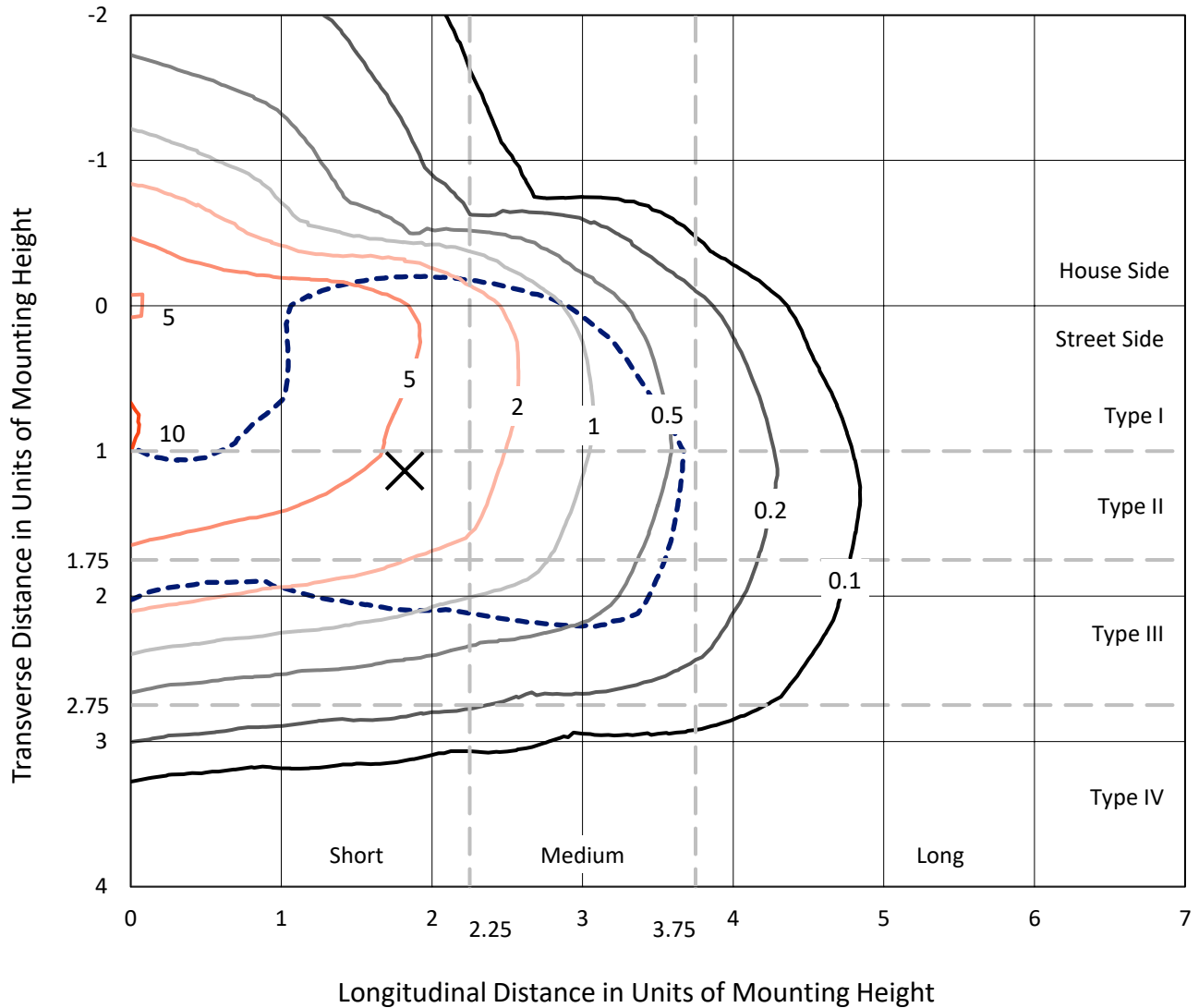
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

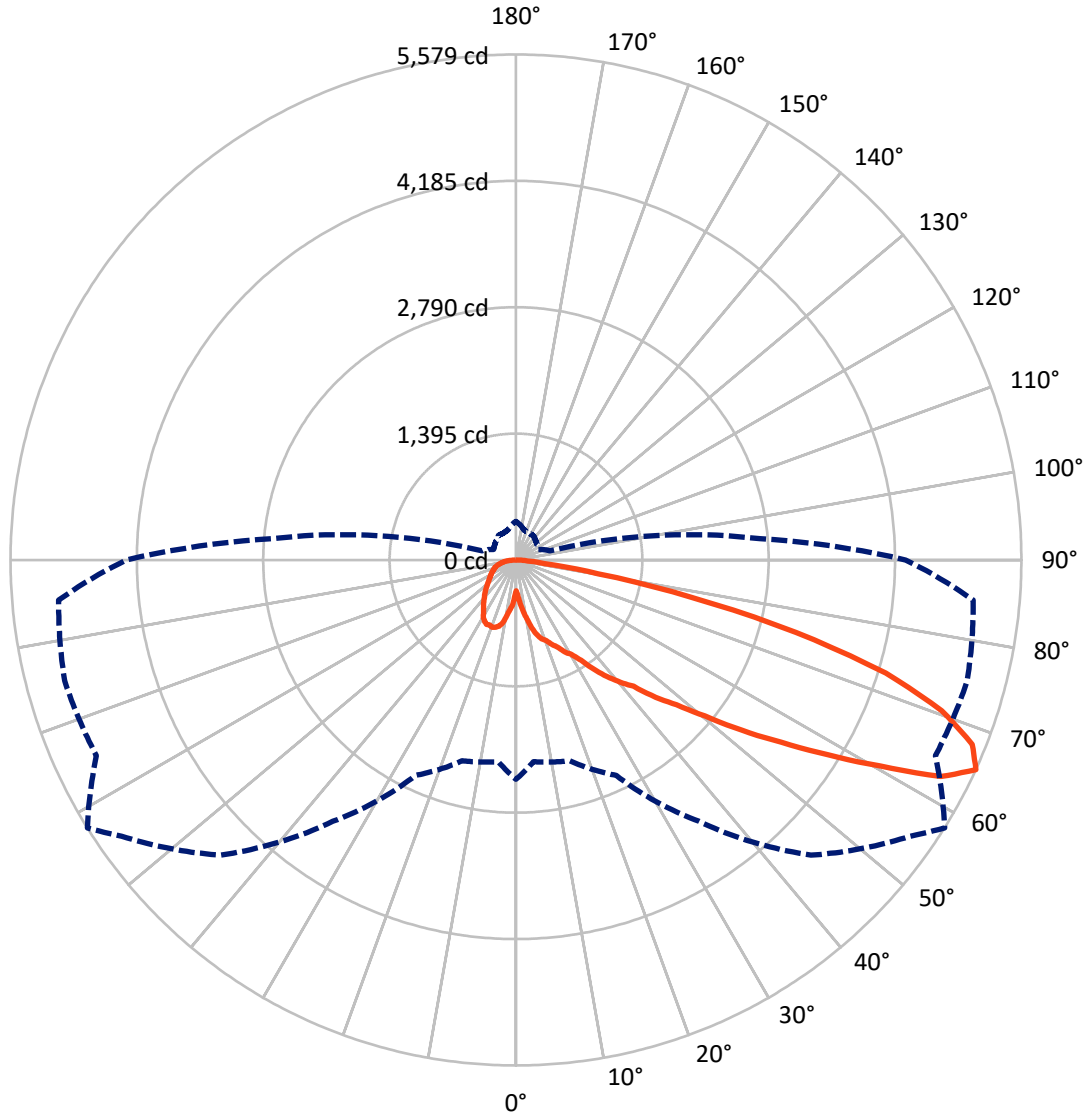
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.3 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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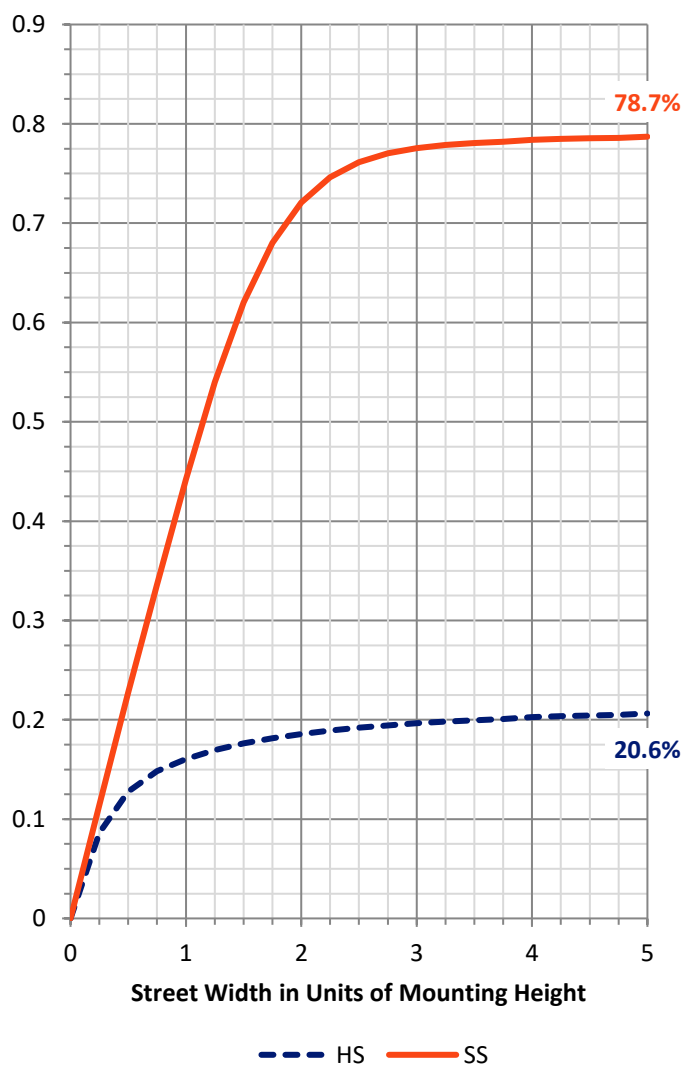
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1671.8	0.0	1671.8
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	6265.2	0.0	6265.2
	% Fixture	78.9	0.0	78.9
Total	Lumens	7937.0	0.0	7937.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.9	0.7
10°-20°	226.5	2.9
20°-30°	434.6	5.5
30°-40°	717.6	9.0
40°-50°	1192.7	15.0
50°-60°	1969.7	24.8
60°-70°	2209.7	27.8
70°-80°	1004.7	12.7
80°-90°	129.6	1.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	7937.0	100.0
0°-180°	7937.0	100.0

Coefficient of Utilization



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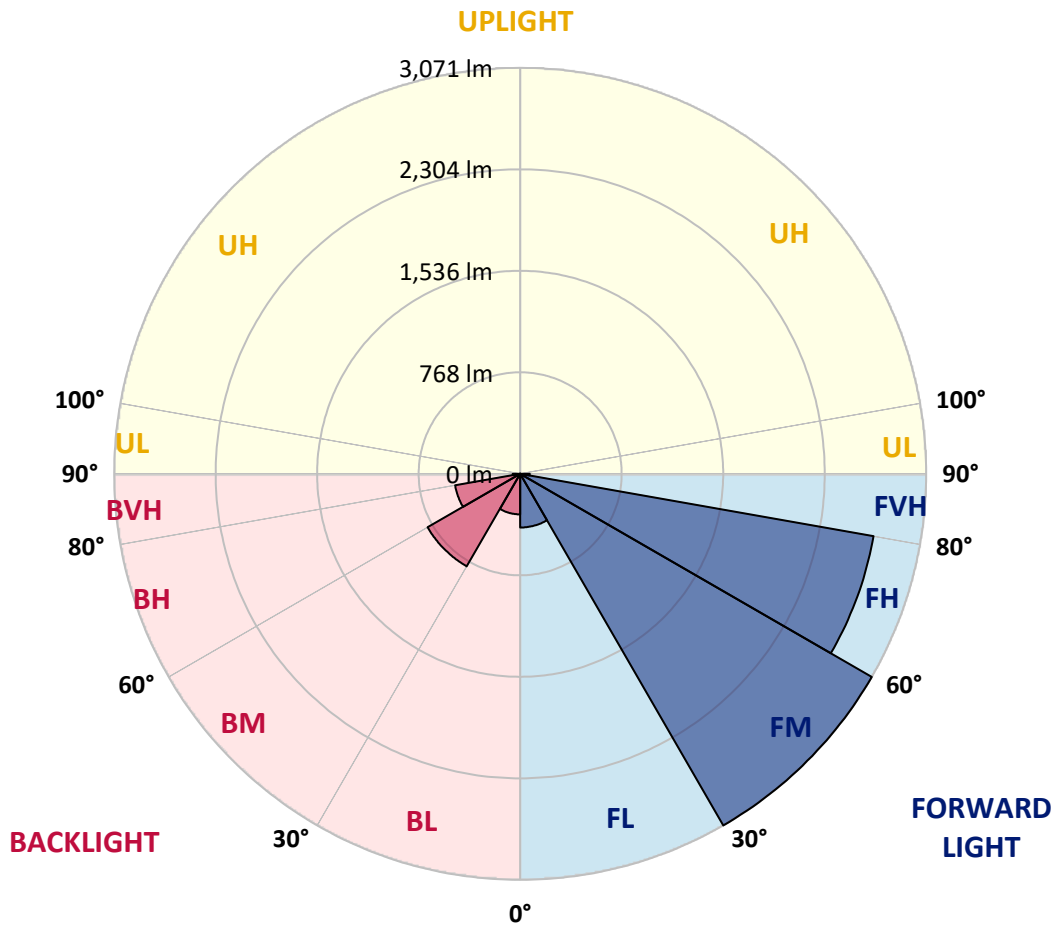
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	406.2	5.1			
FM (30°-60°)	3071.5	38.7			
FH (60°-80°)	2714.6	34.2			G2/5000
FVH (80°-90°)	73.0	0.9			G1/100
BL (0°-30°)	306.9	3.9	B1/500		
BM (30°-60°)	808.5	10.2	B1/1000		
BH (60°-80°)	499.7	6.3	B1/500		G1/500
BVH (80°-90°)	56.6	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	340.8	340.8	340.8	340.8	340.8	340.8	340.8	340.8	340.8	340.8	340.8
2.5°	406.9	394.7	374.2	379.1	391.0	397.6	393.7	388.4	381.4	380.1	410.5
5°	526.9	503.4	493.8	489.8	475.3	466.7	481.6	479.6	487.5	502.1	531.8
7.5°	614.5	597.9	582.1	580.4	552.3	542.4	562.2	572.8	587.0	587.4	627.7
10°	661.4	647.2	646.9	632.0	629.7	648.5	648.8	656.8	658.4	675.3	667.3
12.5°	712.3	711.3	729.5	729.2	750.3	781.4	765.8	765.8	770.5	750.0	775.1
15°	833.6	844.2	810.1	815.8	815.8	846.2	845.2	851.1	865.3	860.0	848.8
17.5°	959.9	966.5	928.8	893.8	896.4	889.8	913.6	915.9	902.4	963.8	950.3
20°	1041.2	1067.0	987.6	943.7	952.3	959.9	960.9	946.6	939.7	1034.2	1015.7
22.5°	1141.7	1119.8	1047.1	998.5	1011.4	1001.2	999.2	1010.1	1019.7	1055.4	1085.5
25°	1208.8	1207.1	1119.8	1066.6	1052.4	1049.4	1069.6	1065.3	1088.1	1152.9	1134.1
27.5°	1306.3	1336.7	1182.0	1195.2	1132.7	1067.0	1131.7	1151.2	1192.2	1181.7	1223.6
30°	1495.3	1472.5	1310.9	1307.3	1236.5	1181.3	1226.3	1209.7	1283.5	1281.1	1312.2
32.5°	1649.7	1665.6	1462.3	1424.3	1371.7	1305.3	1275.5	1321.5	1361.1	1426.2	1443.8
35°	1813.0	1809.3	1617.3	1540.6	1453.7	1426.2	1462.9	1482.1	1566.4	1626.2	1584.6
37.5°	2066.8	2038.1	1818.3	1673.2	1608.0	1598.1	1660.9	1633.2	1724.4	1738.6	1762.1
40°	2302.8	2216.2	2002.0	1835.8	1732.3	1769.3	1771.3	1775.0	1823.9	1862.5	1978.6
42.5°	2527.2	2466.4	2188.8	2063.8	1911.5	1875.4	1897.9	1905.5	2029.1	2108.1	2268.8
45°	2834.0	2671.0	2457.2	2328.9	2158.4	2112.4	2096.6	2162.0	2281.3	2461.1	2599.0
47.5°	3093.4	2946.4	2742.4	2573.5	2382.8	2514.0	2424.1	2387.4	2547.7	2770.5	2990.0
50°	3308.6	3146.7	2946.7	2849.2	2818.8	2935.8	2702.4	2706.7	2853.5	3167.8	3419.4
52.5°	3475.2	3302.3	3125.2	3075.6	3245.5	3312.9	3144.4	3118.9	3226.0	3597.5	3899.6
55°	3630.9	3447.4	3310.6	3411.8	3698.0	3705.6	3693.7	3552.6	3681.5	4057.9	4396.7
57.5°	3670.9	3473.2	3382.3	3527.4	3914.5	4215.6	4333.9	4057.0	4188.2	4476.7	4822.5
60°	3465.0	3295.7	3259.4	3456.4	4031.5	4471.8	4780.8	4615.2	4566.0	4812.9	5120.6
62.5°	3043.2	2846.9	2876.3	3150.0	3908.2	4573.2	5133.8	5263.1	4964.9	5080.3	5250.8
65°	2422.1	2234.7	2294.2	2623.4	3521.2	4607.0	5314.3	5579.4	5109.0	5156.0	5066.4
67.5°	1708.2	1538.0	1613.0	2038.7	2929.2	4175.3	5345.4	5432.0	4955.7	4940.1	4562.7
70°	967.8	861.0	942.3	1297.3	2067.5	3326.1	5101.8	4987.7	4680.7	4460.5	3817.6
72.5°	443.9	407.2	446.2	660.4	1190.2	2213.2	4165.0	4268.5	4033.2	3757.8	2904.4
75°	236.0	223.1	239.6	329.9	556.9	1204.1	2959.3	3191.9	3066.7	2850.2	1894.6
77.5°	175.5	165.6	173.5	213.9	297.5	471.0	1681.4	1974.9	2022.5	1823.2	1052.1
80°	134.5	126.6	134.5	161.6	205.9	223.8	718.9	920.5	1048.4	847.2	418.1
82.5°	99.8	94.5	106.8	121.3	144.8	139.8	255.2	317.6	409.5	280.0	163.0
85°	79.3	72.7	77.3	82.3	92.5	76.7	116.7	130.6	138.2	115.7	60.2
87.5°	31.1	28.8	56.2	44.3	37.7	23.1	35.0	39.7	40.7	39.0	17.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	340.8	340.8	340.8	340.8	340.8	340.8	340.8	340.8	340.8	340.8	340.8
2.5°	413.8	410.5	391.0	397.3	407.5	409.5	413.8	401.9	396.0	417.8	418.8
5°	534.5	516.6	507.4	508.4	501.7	491.5	507.0	517.3	521.2	537.4	543.4
7.5°	628.0	606.5	591.0	573.1	548.0	531.8	558.9	578.8	589.3	623.1	636.3
10°	669.7	652.5	649.2	626.7	626.0	625.7	624.4	617.4	640.2	636.9	646.2
12.5°	755.6	752.0	720.6	711.6	712.6	711.6	683.9	682.5	682.9	713.3	702.4
15°	835.6	836.2	807.5	775.1	746.0	737.1	726.2	721.2	728.5	745.7	735.1
17.5°	934.4	937.7	855.4	804.2	765.8	764.9	738.7	708.0	752.3	762.9	751.3
20°	998.2	984.3	883.2	797.2	786.3	756.6	724.2	681.9	720.2	746.0	753.3
22.5°	1058.7	1034.6	909.0	809.5	757.2	721.9	690.5	663.0	675.3	704.0	699.4
25°	1099.7	1093.1	944.7	838.9	756.3	677.6	635.3	617.8	624.0	668.7	664.4
27.5°	1197.5	1126.1	938.4	846.5	724.5	617.1	595.9	577.1	570.8	619.1	632.3
30°	1263.0	1233.5	980.4	834.6	684.5	567.5	536.5	532.5	534.5	589.3	593.0
32.5°	1374.0	1297.7	1049.1	789.0	626.4	530.8	495.1	496.8	505.7	545.7	554.0
35°	1489.7	1444.1	1058.4	756.3	579.1	491.8	477.3	465.7	470.7	505.7	507.4
37.5°	1704.6	1546.9	1115.2	705.7	544.4	477.0	449.2	438.9	441.6	461.4	475.6
40°	1893.6	1753.5	1088.8	656.8	501.4	457.1	422.4	414.8	406.9	426.4	435.3
42.5°	2196.7	1900.9	1079.8	602.9	481.3	430.4	406.6	386.4	378.8	395.3	411.5
45°	2499.8	2057.2	1031.3	548.4	452.8	428.4	383.4	364.2	366.2	381.1	397.6
47.5°	2837.6	2267.1	949.0	495.5	421.8	418.8	360.3	352.0	358.0	374.5	391.0
50°	3236.9	2489.9	880.9	447.9	399.6	390.0	357.3	347.4	353.0	372.5	388.7
52.5°	3673.5	2734.2	831.3	403.9	374.5	367.2	361.3	351.7	358.3	375.2	392.0
55°	4107.5	2957.3	797.6	373.8	353.0	357.6	369.5	362.6	365.9	378.5	395.3
57.5°	4429.5	3074.9	729.8	341.8	335.5	352.0	370.5	359.0	360.9	378.5	396.6
60°	4616.5	3097.4	618.4	315.7	321.6	340.8	360.3	345.4	344.1	372.8	395.6
62.5°	4596.0	2966.9	490.5	291.9	305.7	323.9	344.7	330.5	334.2	373.5	397.6
65°	4302.5	2700.1	390.0	271.7	286.6	305.4	331.9	326.2	343.8	399.9	426.1
67.5°	3786.9	2310.4	313.3	252.9	268.7	292.9	340.8	355.7	363.3	427.0	453.8
70°	3069.0	1795.1	261.1	236.3	254.5	298.8	366.6	363.6	357.3	414.2	435.3
72.5°	2217.2	1230.6	229.7	220.1	237.0	281.0	367.2	351.4	343.4	378.1	393.3
75°	1387.2	734.1	200.6	199.6	210.2	251.9	350.7	336.5	315.0	332.2	352.0
77.5°	792.3	375.8	168.9	177.8	184.1	218.5	314.0	301.1	281.9	289.2	308.7
80°	302.4	181.8	142.5	158.0	156.3	185.1	266.1	263.1	241.3	243.6	255.5
82.5°	142.5	101.8	118.3	135.8	126.9	147.4	216.2	215.2	196.0	177.5	187.1
85°	52.9	54.2	86.6	103.5	88.3	95.2	156.3	152.0	133.5	112.7	124.6
87.5°	11.9	19.5	42.6	53.9	30.7	29.4	63.1	54.9	52.9	31.4	33.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)